



Visibility & Illumination Of Exit Signs

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

3.4.5.1. Exit Signage

(1) Except as provided by Sentence (9) and (10), every exit door shall have an exit sign providing visual information placed over or adjacent to it if the exit serves

- (a) a building more than 2 storeys in building height,
- (b) a building having an occupant load of more than 150, or
- (c) a room or floor area that has a fire escape as part of a required means of egress.

(2) Except as provided by sentence (7), every exit sign providing visual information shall

- (a) be visible on approach to the exit,
- (b) consist of a green and white or lightly tinted graphical symbol meeting the colour specifications referred to in ISO 3864-1, “Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings,” and
- (c) conform to ISO 7010, “Graphical symbols – Safety colours and safety signs – Registered safety signs, “for the following symbols:

- (i) E001 emergency exit left,
- (ii) E002 emergency exit right,
- (iii) E005 90-degree directional arrow, and
- (iv) E006 450degree directional arrow.

(See Note A-3.4.5.1.(2)(c))

(3) Internally Illuminated exit signs shall

- (a) be continuously illuminated, and



- (b) where illumination of the sign is powered by an electrical circuit, be constructed in conformance with CSA 22.2 NO. 141, “Emergency Lighting Equipment.”
- (4) Externally illuminated exit signs shall be continuously illuminated by a light fixture supplied by an electrical circuit.
- (4.1) Photoluminescent and self-luminous exit sign shall
- (a) conform to CAN/ULC-S572, “Photoluminescent and Self Luminous Signs and Path Marking Systems”,
 - (b) be labeled in accordance with the time duration for which they have been tested and listed,
 - (c) be so installed that upon failure of the regular power they will continue to be illuminated for the applicable time duration specified in Clause 3.2.7.4. (1)(b), and
 - (d) be continuously illuminated if reliant on an external energy source to energize the reflective coating of the sign. (See Note A-3.4.5.1.(4.1))
- (5) If illumination of an exit sign is provided from an electrical circuit, that circuit shall
- (a) serve no equipment other than emergency lighting in the area where exit signs are installed, and
 - (b) be connected to an emergency power supply as described in Sentence 3.2.7.4.(1)
- (6) Where no exit is visible from a public corridor, from a corridor used by the public in a Group A or B major occupancy or from principal routes serving an open floor area having an occupant load of more than 150, an exit sign conforming to Clauses (2)(b) and (c) with an arrow or other indicator pointing at the direction of egress shall be provided.
- (7) Except for egress doorways describe in Sentence 3.3.2.4.(4), an exit sign conforming to Sentences (2) to (5) shall be placed over or adjacent to every egress doorway from rooms with an occupant load more than 60 in Group A, Division 1 occupancies, dance halls, licensed beverage establishment and other similar occupancies that, when occupied, have lighting levels below the level that would provide easy identification of the egress doorway
- (8) Except for suite doors opening directly to the exterior, every exit serving a hotel shall have an exit sign placed over or adjacent to it.
- (9) An exit sign is not required within a suite containing a Group B, Division 3 occupancy if the following requirements are met:



- (a) the suite contains sleeping accommodation for not more than 10 persons, and
- (b) not more than 6 occupants require assistance in evacuation in case of an emergency.

OBJECTIVE

Every exit sign must be visible on approach to the exit and shall consist of a green pictogram and white graphic symbol meeting the visibility specifications referred to in ISO 3864-1, “Graphical Symbols-Safety Colours and Safety Signs, as shown in this Builder Tip.

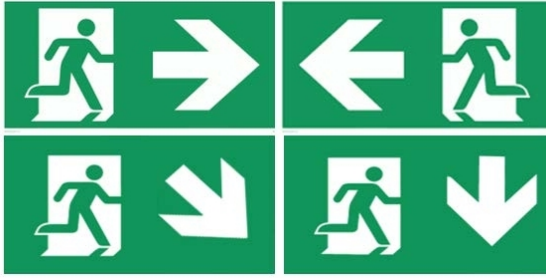
Internally illuminated exit signs shall comply with the requirements of CSA C22.2 No.141 and cannot exceed a maximum viewing distance of 30.5 m.

Photoluminescent exit signs require an external source of lighting for ‘charging’.

Self Luminous signs are illuminated with a light source that consists of glass tubes internally coated with phosphor and filled with tritium gas, a natural isotope of hydrogen. They require no electricity or external light source.

Photoluminescent and Self-Luminous Exit signs evaluated at a viewing distance of less than the maximum 30.5 m in accordance with CAN/ULC-S572 shall be marked with the following statement: “Rated Viewing Distance _____”. The blank shall contain “15.25 m” or “22.86 m” in accordance with the standard, be a minimum of 3.2 mm height and permanent.

The height of a sign is dictated by the legibility of the sign, which for the most part, is related to the distance of the observer to the sign. This means that a typical internally illuminated running man exit sign 305mm W x 178mm H that conforms to ISO 7010 can be read at a maximum distance of $(152\text{mm} \times 100) = 15.25$ meters. A larger sign height would allow for a greater viewing distance, not to exceed 30.5m. Additional exit signs may be introduced at intervals that will maintain the maximum exit sign dimensional height at 305mm.

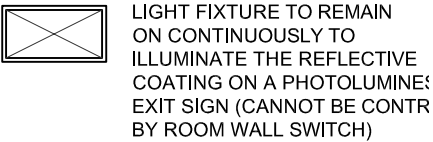


AS PER ISO 7010

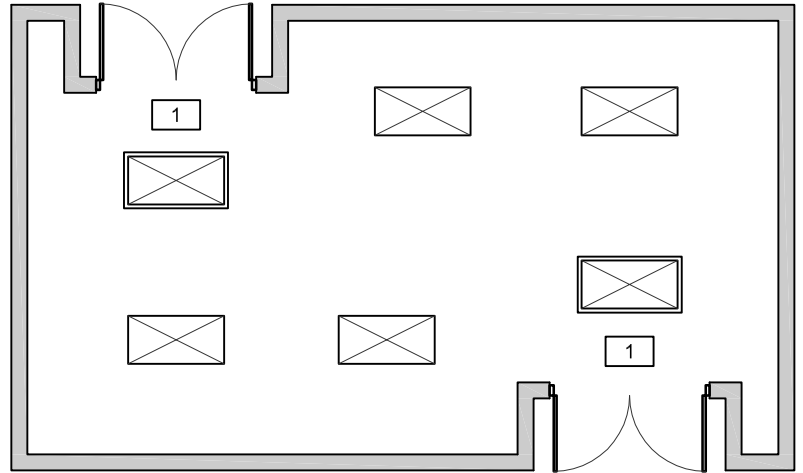
LEGEND



LIGHT FIXTURE MAY BE CONTROLLED BY ROOM WALL SWITCH



LIGHT FIXTURE TO REMAIN ON CONTINUOUSLY TO ILLUMINATE THE REFLECTIVE COATING ON A PHOTOLUMINESCENT EXIT SIGN (CANNOT BE CONTR BY ROOM WALL SWITCH)



REFLECTIVE CEILING PLAN

PHOTOLUMINESCENT EXIT SIGNS

Based on CSA C22.2 No.141, ISO 3864-1, ISO 7010 and CAN/ULC-S572 standard. Also, refer to manufactures specifications.

Maximum Viewing distance:⁽¹⁾

- 15.25m—a sign height of 152mm
- 22.86m—a sign height of 229mm
- 30.5m —a sign height of 305mm⁽³⁾
- 30.5m —a sign height of 330mm

When the maximum viewing distance is exceeded, an additional sign is required until the viewing distance has reached the exit door or facility.

Note: 30.5m is the maximum

Note: Pictogram of running man and arrow shall each be a min. of 150mm x 150mm

Recommended installation heights:⁽²⁾

Above door:	2m–2.5m from floor level to base of sign
Directional wall fixed signs:	1.7m–2m from floor level to base of sign

(1) Factor of distance uncorrected at 100

(2) If sign is installed higher than the recommended heights, the factor of distance must be corrected, and therefore the size of sign must be increased accordingly.

(3) If the factor of distance is corrected, and the installation height of the sign is greater than 2.5m up to 10m above the floor level the sign height dimension of 330mm is recommended. Corrected factors of distance should be designed by a qualified designer.